

## **Remarks**

### *The Present Invention and the Pending Claims*

The present invention relates generally to the field of speech recognition. More particularly, the invention discloses a technique for disambiguating speech input using one of voice mode interaction, visual mode interaction, or a combination of voice mode and visual mode interaction.

Claims 1, 4-5, 7-8, and 11-19 are currently pending. Reconsideration and allowance of the pending claims is respectfully requested.

### *Summary of the Office Action*

Claims 1, 4, 7-8, 11 and 14 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

### *Amendments To The Claims*

Claims 15 - 19 are new.

Claims 1 and 11 are currently amended.

Support for the amendment “a speech disambiguation mechanism resident on one of an end user device and a remote server, and accessed through said end user device possessing multimodal user interfaces” is found at paragraphs [0009], [0010], [0020] and [0023] of U.S. Publication # 2004/0172258 published on Sep. 2, 2004.

Support for the amendment “an options and parameters component for receiving and storing user parameters and receiving application parameters” is found at paragraphs [0020] and [0023] of the U.S. Publication # 2004/0172258 published on Sep. 2, 2004.

Support for the amendment “one or more disambiguation components directing one or more of said multimodal output interfaces to [[that]] present ... and the visual

mode;” is found in the abstract, and paragraphs [0017], [0018], [0027], [0028], and [0030] of the U.S. Publication # 2004/0172258 published on Sep. 2, 2004.

The office action states: “**Claims 1, 4, 7-8, 11 and 14 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**”

In response to the rejection of claim 1, the claim has been amended to positively recite the machine and its constituents. The amended claim 1 now recites a speech disambiguation mechanism **resident on an end user device/ remote server** (for example, see paragraph [0023], where applicant discloses: “*The MDM comprises multiple components (e.g., components 110, 114, 116, 118, 124, and 126) that can be resident on the end user device or can be distributed on other computers on a network....*”). Also see paragraph [0020], where applicant discloses: “*A non-exhaustive list of example devices includes the following: mobile phones; PDA's; and handheld, desktop and laptop computers..*”). Claim 1 as amended also recites that the speech disambiguation mechanism is **accessed through the end user device possessing multimodal user interfaces** (for example, see paragraph [0020], where applicant discloses: “*... End user 108 accesses MDM 102 and application 106 via an end user device which has multimodal input and output capabilities....*”). Also see paragraphs [0010], [0017], [0029], and Abstract). Therefore, it is clearly evident that the speech disambiguation mechanism is implemented on one of a remote server/ an end user device having computing power and possessing one or more multimodal user interface for receiving input and providing output.

Claim 1 as amended also recites an options and parameters component of the speech disambiguation mechanism for receiving and **storing** user parameters for controlling the speech disambiguation mechanism (for example, see paragraph [0020], where applicant discloses: “*MDM software on the end user device has the capability to enter, edit, and store the end user parameters 114, which govern the operations of MDM 102*”). Therefore, it can be inferred that the remote server/end user device on which the

speech disambiguation mechanism is resident comprises a memory for storing the end user parameters.

Furthermore, claim 1 as amended recites that the disambiguation components direct the multimodal user interfaces to present the alternatives to the user in one of voice mode, visual mode, or a combination of the voice mode and the visual mode, and direct the multimodal user interfaces to receive an alternative selected by the user in one of the voice mode, the visual mode, or a combination of the voice mode and the visual mode (see for example, paragraph [0020], where applicant discloses: “*The end user device has various multimodal input and output capabilities... These capabilities are used by the MDM 102 software to present to the end user the recognition alternatives 120, and to accept and interpret the user selection input. Various types of input can be accepted including speech input, keypad input, stylus input, touch input, based on the end user device capabilities*”. Also see paragraphs [0028] and [0030]).

Claim 1 as amended also recites an output interface for communicating a selected alternative as input to the application (see paragraph [0029]). Therefore, applicant submits that the speech disambiguation mechanism comprises an interface for communicating data to the application.

In addition to meeting the requirement of reciting system belonging to a statutory class, applicant respectfully submits that claim 1 also transforms underlying material. For example, an options and parameters component **receives user parameters and application parameters for generating tokens to disambiguate words in the speech** (see paragraph [0011], [0025] and [0030]).

Accordingly, applicant submits that claim 1 as amended recites subject matter that falls under a statutory class such as a computer system having one or more input interfaces for receiving input and one or more output interfaces for providing output, and that transforms the underlying subject matter (for example: speech input) into another

form (for example: tokens representing disambiguated words). Therefore, applicant respectfully submits that the rejection of claim 1 be withdrawn.

Claims 4, 5, 7, 8, and 15 are dependent on claim 1. Since claim 1 as amended is now tied to a machine and transforms an underlying subject matter into another form, and is thus allowable, applicant respectfully submits that dependent claims 4, 5, 7, 8, and 15 are also allowable.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In response to the rejection of claim 11, the claim has been amended to positively recite the machine and its constituents to which the process is tied. The amendments in claim 11 now recite a speech disambiguation mechanism resident on **an end user device / a remote server**. The end user device / remote server provide physical interfaces to access and use the speech disambiguation mechanism. Applicant's disambiguation method necessitates the use of multiple I/O user interfaces on the end user device in every usage scenario, given the multimodal nature of the interactions performed with the user during speech disambiguation (for example, see paragraph [0010], where applicant discloses: *"Preferably the different modes of input/output devices include visual and voice modes. Visual mode may use devices such as a visual display, stylus, pen, buttons, keyboard, touch pad, touch screen, mouse, etc. Voice mode may use devices such as a microphone (with an optional push-to-talk button), speakers, headphones, speakerphone, etc."*). Also see paragraphs [0010], [0017], [0020], [0023], and [0029]). Any user interaction, such as receiving speech input from the user, presenting alternatives to the user, etc. requires the physical user interfaces to be directed to perform the method steps such as those recited in claim 11. Furthermore, the options and parameters component receives and stores user parameters and further receives application parameters for controlling the speech disambiguation mechanism, which requires the options and parameters component to be functionally associated with a memory, for example, a disk drive of the end user device or the server for storing the user parameters.

In addition to meeting the requirement of reciting a statutory class tied to the process, applicant respectfully submits that claim 11 also transforms underlying material, for example, an options and parameters component for **receiving user parameters and application parameters** and storing said received user parameters **for generating tokens to disambiguate words in the speech**, direct the I/O interfaces to present alternatives to the user, communicate the selected alternative as input to the application, etc (see paragraphs [0011] and [0025]). These components undergoing transformation are inherently stored in or associated with a computer-readable medium or architecture, which in turn is associated with the end user device or the remote server. Therefore, applicant submits that the transformation is attributed with both the components and the computer-readable medium associated therewith.

For the reasons stated above, applicant respectfully submits that claim 11 as amended recites subject matter that falls under a statutory class such as a computer system having one or more input interfaces for receiving input and one or more output interfaces for providing output, and that transforms the underlying subject matter (for example: speech input) into another form (for example: tokens representing disambiguated words). Therefore, applicant respectfully submits that the rejection of claim 11 be withdrawn.

Claim 14 is dependent on claim 11. Since claim 11 as amended is now tied to a machine and transforms an underlying subject matter into another form, and is thus allowable, applicant respectfully submits that dependent claim 14 is also allowable.

Claim 16 is a method claim. The arguments of statutory subject matter made for method claim 11 are equally applicable to claim 16. Furthermore, claim 16 as amended recites a communication network for accessing the speech disambiguation mechanism using an end user device possessing multimodal interfaces (see for example, paragraph [0023], where applicant discloses: “*The MDM comprises multiple components (e.g., components 110, 114, 116, 118, 124, and 126) that can be resident on the end user device*”).

*or can be distributed on other computers on a network. Portions of the MDM 102 can be resident in the application 104...”).* Therefore, applicant respectfully submits that claim 16 is tied to a statutory class and therefore allowable.

Claims 17-19 are dependent on claim 16. Since claim 16 is tied to a statutory class and therefore allowable, applicant respectfully submits that dependent claims 17-19 also tied to a statutory class and are also allowable.

### *Conclusion*

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If, in the opinion of Examiner Rider a telephone conference would expedite the prosecution of this application, Examiner Rider is requested to call the undersigned.

Respectfully submitted,



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Date: June 5, 2009

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